

prevalence of preHTN and HTN was 56.8% and 25.0% in males, and 43.1% and 36.1% in females, respectively. Subjects with preHTN and those with HTN showed higher prevalence of diabetes, dyslipidemia, obesity and abdominal obesity than the normotensive (NT) group. The risk of developing CHD within 10 years was above 15% for 3.9%, 31.1% and 65.0% among NT, preHTN and HTN subjects, respectively. In multivariate analysis, preHTN was associated with age, male gender, obesity, abdominal obesity and smoking. In total, preHTN is very common in Tunisians. It is associated with a higher prevalence of cardio-metabolic risk factors and confers a higher risk for subsequent CHD. These findings support the recommendations of lifestyle modification for preHTN patients.

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Correlations between LDL and HDL subclasses and serum lipoprotein-associated phospholipase A2

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Objective: It has been shown that blood levels of Lipoprotein-associated phospholipase A2 (Lp-PLA2) predict future cardiovascular events regarding the presence of any other traditional cardiovascular (CV) risk factors except

LDL-Cholesterol (LDL-C). The aim of our study was to assess possible links between Lp-PLA2 and LDL and HDL subclasses.

Methods: Overweighed and obese patients with no history of cardiovascular disease were recruited at our outpatient clinic and all underwent routine clinical and biological evaluation, as well as LDL and HDL subclasses determination. None was under any lipid lowering treatment. Lp-PLA2 was measured in serum with a Plac test turbidimetric immunoassay.

Results: 49 patients were included. Mean body mass index was 31.84kg/m² (sd: 3.45). The Lp-PLA2 ranged from 41 to 407 ng/mL; mean value was 201 ng/mL (sd: 73). Mean values for total cholesterol, LDL-C, HDL-C and apoB were respectively 2.31 g/L (sd: 0.38), 1.39 g/L (sd: 0.32), 0.47 g/L (sd: 0.13), and 1.27 g/L (sd: 0.25). 18 patients (37%) had diabetes. Mean HDL2b percentage was 11.47% (sd: 7.48). Mean HDL3b percentage was 27.22 % (sd: 9.22). In univariate analysis, we found a strong linear correlation between Lp-PLA2, and LDL-C ($r=0.42$, $p<0.028$) as well as apoB ($r=0.31$, $p=0.02$) and total cholesterol ($r=0.44$, $p=0.001$). There was no correlation between percentages of LDL subclasses (LDL 1,2,3 and 4) or LDL size peak and Lp-PLA2 levels. We found no correlation with total HDL-C but a positive correlation with HDL2b percentage ($r=0.29$, $p=0.04$) and a negative association with HDL3b percentage ($r=-0.3$, $p=0.03$). Neither ApoA1 ($r=0.061$) nor ApoA2 ($r=0.059$) were correlated with Lp-PLA2 dosages.

Conclusion: In our population, LpPLA2 was related with total LDL-C levels without any significant relation with the LDL subclasses distribution. By contrast, LpPLA2 was not correlated with HDL-C level but with HDL subclasses. Interestingly, LpPLA2 was negatively correlated with HDL3b and positively with large HDL particles (HDL2b). This supports differential properties of HDL subclasses in atherosclerosis and suggests a potential interaction between HDL and LpPLA2.